

REMARKS

Reconsideration and allowance of the above-identified application is respectfully requested. Claims 1, 2, 7-13 and 15-22 remain pending, wherein claims 1, 7-9, 13 and 20 have been amended. Claims 3-6 and 14 have been cancelled.

The Office Action rejects claims 1, 2, 13, 14, 16 and 20 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,293,260 to Atanasyan (“Atanasyan”). This rejection is respectfully traversed.

Applicants submit that Atanasyan does not anticipate amended claim 1, which now includes the limitations of claims 3-6. For example, Atanasyan does not disclose that the “fuel/air ratio of the internal combustion engine is adapted additively in the second operating mode or multiplicatively in the third operating mode,” and that an “additive or a multiplicative adaptation of the fuel/air ratio takes place as a function of the rotational speed and torque,” as recited in Applicants’ claim 1.

Atanasyan discloses a process for regenerating a fuel vapor filter for a direct injection engine operating on a stratified charge (Col. 2, lines 20-23). Specifically, a process is disclosed whereby the fuel vapor filter is regenerated by authorizing the opening of a discharge valve when the degree of saturation of the filter exceeds a predefined threshold value, which allows the fuel vapors to enter

one or more cylinders of the engine. (Col. 4, lines 14-31). There is no discussion in Atanasyan of using additive or multiplicative adaptation of the fuel/air ratio based on the rotational speed and torque of the engine. Therefore, Atanasyan does not disclose all the elements of claim 1, and hence does not anticipate claim 1.

Similarly, claim 13, as amended, recites a first state variable “wherein said at least one first state variable represents at least one of a rotational speed and torque of the internal combustion engine, and an additive or a multiplicative adaptation of the fuel/air ratio takes place as a function of the rotational speed and torque.” For reasons discussed above with regard to claim 1, Atanasyan does not anticipate Applicants’ claim 13.

Claim 20, as amended, recites “additional evaluation units that disable a lean operating mode of the internal combustion engine when there is additive or multiplicative adaptation of the air/fuel mixture.” There is no discussion in Atanasyan of additive or multiplicative adaptation of the air/fuel mixture, or of an evaluation unit that disables a lean mode of operation when these adaptation modes are used. Therefore, Atanasyan does not disclose all the elements of claim 20, and hence does not anticipate claim 20.

Claims 2 and 16 depend from claims 1 and 13 respectively. Therefore, for the reasons discussed above with regard to claims 1 and 13, Atanasyan does not anticipate Applicants' claims 2 and 16.

The Office Action rejects claims 1, 2, 13, 14 and 20 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Publication No. US 2004/0162666 to Bidner et al. ("Bidner"). This rejection is respectfully traversed.

Applicants submit that Bidner does not anticipate claim 1 as amended. For example, Bidner does not disclose that "additive or a multiplicative adaptation of the fuel/air ratio takes place as a function of the rotational speed and torque," as recited in Applicants' claim 1.

Bidner discloses a method for controlling fuel vapor purging in a lean burn engine system. Rather than discontinuing lean operation during fuel vapor purging, Bidner maintains lean operation in order to minimize the impact on vehicle emission. (abstract). There is no discussion in Bidner of monitoring the rotational speed and torque of the engine, and using these quantities to determine whether the engines fuel/air ratio is adapted additively or multiplicatively. Therefore, Bidner does not disclose all the elements of claim 1, and hence does not anticipate claim 1.

Claim 2 depends from claims 1. Therefore, for the reasons discussed above with regard to claim 1, Bidner does not anticipate Applicants' claims 2.

Similar to claim 1, amended claim 13 recites a first state variable “wherein said at least one first state variable represents at least one of a rotational speed and torque of the internal combustion engine, and an additive or a multiplicative adaptation of the fuel/air ratio takes place as a function of the rotational speed and torque.” For reasons discussed above with regard to claim 1, Bidner does not anticipate Applicants’ claim 13.

Claim 20, as amended, recites “additional evaluation units disable a lean operating mode of the internal combustion engine when there is additive or multiplicative adaptation of the air/fuel mixture.” There is no discuss by Bidner of additive or multiplicative adaptation of the air/fuel mixture, or of an evaluation unit that disables a lean mode of operation when these adaptation modes are used. Therefore, Bidner does not disclose all the elements of claim 20, and hence does not anticipate claim 20.

The Office Action rejects claims 3-12 under 35 U.S.C. 103(a) as being unpatentable in view of the combination of Atanasyan and U.S. Patent Publication No. US 2003/0106522 to Esteghlal (“Esteghlal”). This rejection is respectfully traversed.

Claim 1 has been amended to recite the limitations previously found in claims 3-6. The combination of Atanasyan and Esteghlal does not render

Applicants' claim 1 unpatentable because the combination does not disclose or suggest all the elements of Applicants' claim 1.

As discussed above with regard to the 102(b) rejection of claim 1 as being anticipated by Atanasyan, Atanasyan does not disclose that the "fuel/air ratio of the internal combustion engine is adapted additively in the second operating mode or multiplicatively in the third operating mode," and that an "additive or a multiplicative adaptation of the fuel/air ratio takes place as a function of the rotational speed and torque," as recited in Applicants' claim 1.

Esteghlal does not remedy the above-identified deficiency of Atanasyan. Esteghlal discloses a method to compensate for faulty adaptations of the pilot control of fuel metering (adaptation) for an internal combustion engine which is operated in a homogeneous mode and a stratified charge mode wherein mixing regulation of the mixture and adaptation of mixture regulation takes place in homogeneous mode." (Paragraph [0012]). There is no discussion of the use of additive and multiplicative adaptation of the fuel/air ratio as a function of rotational speed and torque.

Because the combination of Atanasyan and Esteghlal does not disclose all the elements of claim 1, the combination cannot render claim 1 unpatentable. In addition, because claims 7-12 variously depend from claim 1, the combination of Atanasyan and Esteghlal cannot render claims 7-12 unpatentable.

The Office Action rejects claims 15 and 17-22 under 35 U.S.C. 103(a) as being unpatentable in view of the combination of Atanasyan and Applicant's "admitted prior art." This rejection is respectfully traversed.

As discussed above with regard to the 102(b) rejection of amended claim 20 in view of Atanasyan, Atanasyan does not disclose or suggest all the elements of claim 20. In addition, the present application makes no disclosure of prior art that remedies the deficiency of Atanasyan. Therefore, Atanasyan in combination with any prior art that might be disclosed in the present application do not disclose or suggest all the elements of claim 20.

As discussed above with regard to the 102(b) rejections of claims 13 and 20 are patentable over the cited references, therefore claims 15, 17-19, 21 and 22, which variously depend on claims 13 and 20, are also patentable.

Applicants' respectfully request the rejections of claims 1, 2, 7-13 and 15-20 be withdrawn.

All outstanding rejections have been addressed. It is respectfully submitted that the present application is in immediate condition for allowance. Notice to this effect is earnestly solicited. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

Serial No. 10/787,254

Reply to Office Action Mailed: October 6, 2005

Attorney Docket No. 095309.53202US

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #095309.53202US).

Respectfully submitted,

Date: January 4, 2006



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